

**Private-Side LAN/WAN
Bandwidth Allocation Policy - Version 3
Effective July 1, 2012**

Background

This policy is intended to create an equitable method of determining how much private-side bandwidth is funded for each public school and library in SC. The following factors were considered in establishing this bandwidth allocation policy:

A. Private-Side LAN/WAN Bandwidth Allocation Policy for Schools

1. Funded Bandwidth

For 2012 we will make an effort to provide all schools with a minimum 100 Mbs bandwidth funded. Bandwidth at Hub/Aggregation Points/ Multi-School complex sites will be determined by the DSIT Network Design group based on the technology available.

2. Unfunded Bandwidth

If a district/library wants more than the funded baseline bandwidth, they will be responsible for the difference in cost of that additional bandwidth. The amount paid by the district/library is referred to as the "Cost Share" and is calculated as described in Item 3 below.

No "grandfather clause" will apply under this policy; therefore, sites that already have more than their 2011 baseline bandwidth will begin paying the Cost Share for any bandwidth above their 2011 baseline on July 1, 2012.

3. Cost Share Calculations

The monthly Cost Share is the portion of the Total Cost of the bandwidth above the funded baseline for Private-Side Ethernet-type service that is not covered by E-Rate funding.

The Cost Share formula is:

$$\text{Cost of Requested Bandwidth} - \text{Cost of Funded Bandwidth} = \text{Cost Difference}$$

$$\text{Cost Difference} * \text{District Non-Discount \% (100\% - District \%)} = \text{Monthly Cost Share}$$

Example 1 - School A (90% District) is approved for 10 Mbs & wants 20 Mbs (and the increase is approved by the K-12 Technology Committee):

Current 20 Mbs cost	\$1,410
Minus baseline 10 Mb cost	<u>\$ 873</u> (Spirit Avg for 10 Mbs)
= Difference	\$ 537 difference
Times 10% (100%-90%)	\$ 53.70 Monthly Cost Share

Example 2 - School B (80% District) is approved for 10 Mbs & wants 20 Mbs (and the increase is approved by the K-12 Technology Committee):

Current 20 Mbs cost	\$1,410
Minus baseline 10 Mb cost	<u>\$ 873</u> (Spirit Avg for 10 Mbs)
= Difference	\$ 537 difference
Times 20% (100%-80%)	\$ 107.40 Monthly Cost Share

B. Private-Side LAN/WAN Bandwidth Allocation Policy for Library Systems

Since there is no student headcount that can be applied for libraries, an alternative basis is the number of personal computers (PCs) with Internet access at each site. The State Library collects this information from Library Systems and shares it with the Division of State IT (DSIT).

1. Funded Bandwidth

For 2012, private-side bandwidth for Library Systems is based on a 10 Mbs funded baseline and the number of computers with Internet access at each site report to DSIT in November 2011. Sites having more than 82 PCs are eligible for additional bandwidth based on 128 kilobits (kbs)/PC. Bandwidth at Hub/Aggregation points will be determined by the Network Design group at DSIT with consideration of PC counts as well as the bandwidths at each feeder/branch site.

The following chart shows the 2012 Tiers breakdown for Library sites:

<u>PC Count</u>	<u>Funded Bandwidth*</u>
0 to 82	10 Mbs
83 to 160	20 Mbs
161 and above	50 Mbs

** Bandwidth for Hubs/Aggregation points considers total PC counts plus the bandwidth of feeder branches. This will be determined by the DSIT Network Design group based on the technology available. Any additional hardware and/or software required for the agreed upon network design will be the responsibility of the Library System.*

*** Note: 10 Mb Ethernet may be provided where it is more economical than multiple T1's or MPLS service*

2. Unfunded Bandwidth

If a Library System wants more than the funded baseline bandwidth, they will be responsible for the difference in cost of that additional bandwidth. The amount paid by the library is referred to as the "Cost Share" and the process for determining if a Cost Share will apply is described in Item 2 of ***Section A. Private-Side LAN/WAN Bandwidth Allocation Policy for Schools.***

No "grandfather clause" will apply under this policy; therefore, sites that already have more than their 2011 baseline bandwidth will begin paying the Cost Share for any bandwidth above their 2011 baseline on July 1, 2012.

3. Cost Share Calculations

Cost Share calculations for Library Systems will use the same formula as described in Item 3 of ***Section A. Private-Side LAN/WAN Bandwidth Allocation Policy for Schools.***

C. District/Library System Responsibilities

1. All required E-Rate documents (CIPA and Technology Plans) must be current and on file with the Division of State IT (DSIT) and/or SC Department of Education (SDE).
1. District/Library must be in good financial standing with DSIT (no past due invoices).
2. Annual Block 4 Inventory Verification Documents submitted to DSIT by November 15th each year.
 - Any District/Library site not listed on this inventory will be direct billed to the District/Library until the start of the next funding year. (DSIT cannot be reimbursed for sites not listed in the Block 4 section of the statewide E-Rate Applications.)
 - Districts/Libraries must notify DSIT of site disconnects as soon as possible. Failure to do so could result in a charge to the District/Library for 100% of the ineligible charges paid by DSIT for an inactive location plus any audit re-payments required.
 - For school or library moves or replacements, the state can only fund one circuit; therefore, simultaneous services at both the old site and the new site will only be provided for a maximum of thirty days. After thirty days, the old site will be disconnected or direct billed to the school district or library
 - Full cooperation with the DSIT Security Staff is required for any Dedicated Internet Access (DIA) or Managed Internet Service (MIS) bandwidth upgrade.

D. Security and Traffic Monitoring Activities to be performed by the South Carolina Chief Security Officer's staff:

1. Real-time Monitoring of the K-12 Schools & Libraries Network.

- Network entry point monitoring using an Intrusion Detection System (IDS) on district networks
- Internal and DMZ monitoring
- Reporting of most critical security events based on IDS events
- Notification of critical security events based on SOC monitoring
- Notification of configuration or hardware issues that may be affecting correct IDS operation

2. Real-time visibility / insight over critical assets and bandwidth usage.

3. Periodic baseline scans of public-facing IP space.

4. Optional service. Some of these services may incur additional costs for hardware, licensing and/or time billed.

- Security consulting, training, and implementation assistance
- Security implementation assistance
- Security policy management, including formulation and review
- Security system design and planning
- Network scanning to identify some forms of unauthorized access
- Incident consulting & law enforcement coordination
- Assistance with forensic analysis & reporting
- Web application testing
- Periodic vulnerability and compliance assessment
- Caching proxy server installation and host server/reports management. Host server management may be done by network members via their own servers. Where feasible, IDS and proxy may be combined in a transparent in-line configuration for SC-ISAC owned servers.
- Bandwidth management/improvement consultation

Summary of Previous Policy Revisions

1. Version 1 of this policy established the following:

1. New bandwidth baselines
2. New Private-Side Cost Share Formula for schools and libraries
3. District/Library System Responsibilities

1. All required E-Rate documents (CIPA and Technology Plans) must be current and on file with the Division of State IT (DSIT) and/or SC Department of Education (SDE).
2. District/Library must be in good financial standing with DSIT (no past due invoices).
3. Annual Block 4 Inventory Verification Documents submitted to DSIT by November 15 each year.
 - Any District/Library site not listed on this inventory will be direct billed to the District/Library until the start of the next funding year. (DSIT cannot be reimbursed for sites not listed in the Block 4 section of the statewide E-Rate Applications.)
 - Districts/Libraries must notify DSIT of site disconnects as soon as possible. Failure to do so could result in a charge to the District/Library for 100% of the ineligible charges paid by DSIT for an inactive location plus any audit re-payments required.
 - For school or library moves or replacements, the state can only fund one circuit; therefore, simultaneous services at both the old site and the new site will only be provided for a maximum of thirty days. After thirty days, the old site will be disconnected or direct billed to the school district or library

Version 2 of this policy established the following:

1. **Optional Security Monitoring Available to Districts and Libraries See Section C. Security and Traffic Monitoring Activities to be performed by the SC Chief Security Officer's Staff.** This Policy includes the functions and/or services that may be provided through the existing Intrusion Detection System (IDS) unit provided by the state at no cost to the district or library. The original purpose of the IDS is to continue to monitor Internet traffic and utilization; however, it can also be used to monitor the private-side network services at the request of the district or Library System.

Version 3 of this policy established the following:

1. District/Library System Responsibilities (Revisions)

a. Modified titles, and statements to include the words "School" and Career and Technology Education centers "CATE".

b. Added the following statements regarding CIPA compliance requirements to remain an active member of the K-12 Schools & Libraries Network:

- All schools/districts/libraries/CATEs residing on the K-12 Schools & Libraries Network must be 100% compliant with the "Protecting Children in the 21st Century Act" by July 1, 2012 as required by the FCC E-Rate Program rules.
- Any school/district/library/CATEs that is noncompliant with E-Rate CIPA rules may be removed from the K-12 Schools & Libraries Network. This will result in direct billing for services rendered.
- Request to be returned to the network will require proof of compliance before approval can be granted.
- Full cooperation with the DSIT Security Staff is required for any Dedicated Internet Access (DIA) or Managed Internet Service (MIS) bandwidth upgrade.

2. Funded Bandwidth Baseline for Schools (Revisions)

a. All school will have a minimum of 100 Mbs bandwidth funded regardless of student head counts.

b. All districts will now be eligible to acquire up to GIG funded bandwidth at Hub/Aggregation Points. This qualification will be determined by the DSIT Network Redesign Group.

3. Security and Traffic Monitoring Activities to be performed by the SC Chief Security Officer's staff

a. Updated information added to this section of the policy.